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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,143	06/06/2006	Masaaki Kameya	055471-0115	8848

22428 7590 07/09/2008
FOLEY AND LARDNER LLP
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WASHINGTON, DC 20007

EXAMINER

STEVENS, GERALD D

ART UNIT	PAPER NUMBER
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2817

MAIL DATE	DELIVERY MODE
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07/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,143	Applicant(s) KAMEYA, MASAOKI	
	Examiner GERALD STEVENS	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/3/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 recites the limitation "alternately and vertically connecting the section divided and arranged into a first and second inductors in a horizontal direction and the section not divided" in lines 6-8. There is insufficient antecedent basis for "the section divided" and "the section not divided" in the claim.
3. Claim 2 recites the limitation " the inductors of two sections formed between the section not divided in the horizontal direction and the preceding and the following sections divided in the horizontal direction, with the section not divided placed there between" in lines 2-4. There is insufficient antecedent basis for "the section divided" and "the section not divided" in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 & 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andrews Jr. et al in view of Lin et al.

Regarding claims 1 & 2, Andrews Jr., as depicted in figs. 1 & 2, teaches having a lumped parameter delay line (whole fig) comprising: Five spiral coils (20,22) that are placed in a series configuration and are formed on a support member (38) in an alternating top and bottom arrangement. The spiral coils (20,22) are formed in two different layouts with coils 20-2 & 22-8 being shaped as single spiraling sections (i.e. sections not divided) and coils 22-2 & 20-4, 22-4 & 20-6, & 22-6 & 20-8 being shaped as first spiraling sections (22-2,22-4,22-4) that flow into a second spiraling section (20-4,20-6,20-8, respectively, i.e. sections divided) with each of the paired spiral coils (20-2 & 22-2, 20-4 & 22-4, 20-6 & 22-6, 20-8 & 22-8) evolving from their common axes in opposite directions to provide a positive coefficient of coupling (M). The five spiral coils (20, 22) are further connected at each junction (26) to the first lead of a capacitor (24) that has the second lead connected to a conductive strap (34) to form four filter sections (2, 4, 6, 8), but Andrews Jr. fails to teach alternating the single spiral coils and the spiral coils with two sections in a vertical configuration and having multiple alternating sections.

Lin, as depicted in fig. 18, teaches having a low pass filter comprising: A group of spiral inductors (L1, L3, L5, L7) that are formed on a multilayered substrate (layers 3-6). The inductors L3 & L5 are formed as spiral inductors (142 & 144) that are composed of two adjacent and connected spiral inductors that are formed on two substrate layers (layers 3&4 & layers 5&6, respectively) and the spiral inductors L1 & L7 are formed as spiral inductors that are composed of a

single spiral inductor that is formed on two substrate layers (layers 5, 6 & layers 3, 4 respectively). The lower, left-hand section of spiral inductor L5 located on substrate layer 5 of the multilayer substrate and the upper, right-hand section of spiral inductor L3 located on substrate layer L4 of the multilayer substrate makes a section of the low pass filter that is not divided in the horizontal direction. The upper section of spiral inductor L5 located on substrate layer 6 of the multilayer substrate and the lower section of the spiral inductor L3 located on substrate layer 3 form two inductors that are divided in the horizontal plane with the undivided section in between. This pattern of spiral inductors being arranged in an alternating fashion of spiral inductors (L3 & L5) that are divided in the horizontal plane and spiral inductors (L1 & L7) that are not divided in the horizontal plane is repeatable for any number of desirable filter stages (fig. 4 whole figure, col. 3 lines 22-28, wherein fig. 4 is a generic teaching of the specific filter shown in fig. 18, i.e. claim 2).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the lumped parameter delay line such as taught by Andrews Jr. with the multilayer substrate configuration such as taught by Lin because the multilayer substrate configuration such as taught by Lin provides the benefit of reducing the size of lump element inductors (col. 6-7 lines 67 & 1-3) such as in a lumped parameter delay line.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERALD STEVENS whose telephone number is (571)270-5076. The examiner can normally be reached on Mon-Fri 7:30am - 5:00pm EST alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/BENNY LEE/
PRIMARY EXAMINER
ART UNIT 2817**

GDS